WHAT IS CLAIMED IS:

1. An illumination device comprising:

(a) a light source;

(b) a light fiber comprising:

an elongate polymeric core having an input end for receiving light from a light source, an output end for emitting light transmitted through the core, and a lateral surface extending along a longitudinal axis of the core between the input end and the output end;

a light-emitting region directing light traveling though the light fiber out of at least a portion the lateral surface of the light fiber in a direction generally transverse to the longitudinal axis, the light-emitting region comprising at least one optical element; and

a continuous outer cladding layer comprising a polymeric material having a lower index of refraction than the core extending over the lateral surface of the core and the optical elements;

wherein the light fiber is optically coupled to the light source such that at least a portion of the light emitted from the light source impinges on the input end of the light fiber.

2. The illumination device of claim 1, wherein the light-emitting region comprises a series of two or more optical elements separated at a distance from one another along the longitudinal axis of the core.

3. The illumination device of claim 2, wherein the light emitting region has a

length along the longitudinal axis that is less than a total length of the light fiber along the longitudinal axis.

4. The illumination device of claim 2, wherein the light-emitting region of the light fiber emits light with a lateral angular distribution of less than 360 degrees.

5. The illumination device of claim 2, wherein the light-emitting region of the light fiber emits light with a lateral angular distribution of less than 180 degrees.

6. The illumination device of claim 2, wherein the light fiber is rotatably connected to the light source.

7. The illumination device of claim 2, wherein the light fiber is detachably connected to the light source.

8. The illumination device of claim 2, wherein the light fiber emits light from both the output end and the light-emitting region.

9. The illumination device of claim 2, wherein the light source is a flashlight.

10. The illumination device of claim 2, wherein the continuous outer cladding comprises fluorinated ethylene-propylene.

11. The illumination device of claim 2, wherein the light-emitting region comprises at least three optical elements regularly spaced along the longitudinal axis of the core.

12. The illumination device of claim 2, wherein the light-emitting region comprises at least three optical elements irregularly spaced along the longitudinal axis of the core.

13. The illumination device of claim 2, wherein the optical elements have a depth ranging from about 1% to 10% of a thickness of the light fiber.

14. The illumination device of claim 2, wherein the light fiber includes a first optical element having a first depth and a second optical element having a second depth wherein the first depth is not equal to the second depth.

15. The illumination device of claim 2, wherein the light fiber has a circular cross-sectional shape and has a diameter ranging from about 1 mm to about 25 mm.

16. The illumination device of claim 2, wherein the outer cladding layer has a thickness less than about 1 mm.

17. The illumination device of claim 2 further including a jacket layer over the outer cladding layer.

18. The illumination device of claim 2, wherein each of the optical elements comprise at least one reflection surface inclined at an angle from 10° to 80° to a plane normal to the longitudinal axis of the core.